

A new species of the genus *Quelpartoniscus*
(Crustacea: Isopoda: Scyphacidae) from Toyama,
central Japan

| | |
|---------------------------------|---|
| journal or publication title | Bulletin of the Toyama Science Museum |
| number | 28 |
| page range | 13-16 |
| year | 2005-03-25 |
| URL | http://repo.tsm.toyama.toyama.jp/?action=repository_uri&item_id=827 |

**A new species of the genus *Quelpartoniscus* (Crustacea: Isopoda: Scyphacidae)
from Toyama, Central Japan**

Noboru Nunomura

Toyama Science Museum

1-8-31 Nishinakano-machi, Toyama, 939-8084 JAPAN

富山県で発見されたウミベワラジムシの1新種

布村 昇

富山市科学文化センター

939-8084 富山市西中野町1-8-31

富山県下新川郡朝日町元屋敷の砂利海岸飛沫帯から発見されたウミベワラジムシの1種を新種 *Quelpartoniscus toyamaensis* (和名: トヤマウミベワラジムシ: 新称) として記載した。本種は対馬から記録されている *Quelpartoniscus tsushimaensis* (Nunomura, 1990) ともとても類似するが, (1) 体色が薄いこと, (2) 目の個眼数が少ないこと, (3) 第1小顎外葉先端の歯の数の多いこと, (4) 腹尾節後端の形がほぼ直角であること, (5) 雄第1腹肢内肢が太く, 先端に小歯を持つこと, (6) 雄第2腹肢内肢が比較的短いこと, (7) 第一触角最終節に多くの感覚毛を持つことなどによって区別される。また, 和歌山県白浜町番所崎から記録されている *Quelpartoniscus setoensis* Nunomura, 2003とは, (1) 体色が赤みを帯びること, (2) 頭部の前縁の両端が突出していること, (3) 目の個眼数が少ないこと, (4) 第1小顎外葉先端の歯の数の多いこと, (5) 生殖突起が太く, 先端の1部が分岐していること, (6) 第1触角最終節に多くの感覚毛を持つことで区別される。なお, 本種のホロタイプは富山市科学文化センター (TOYA Cr-13082) で保管される。

Key words : Isopoda, Scyphacidae, *Quelpartoniscus*, New species, Taxonomy, Toyama

キーワード : 等脚目, ウミベワラジムシ科, 新種, 分類学, 富山

In August, 2003, during a survey on the shell fauna in the supratidal of pebble shore, Motoyashiki, Miyazaki, Asahi-machi, Eastern part of Toyama Prefecture, Central Japan. I happened to find an unfamiliar terrestrial isopod crustaceans. As a result of my research, it proved to represent a new species of the genus *Quelpartoniscus*.

Order Isopoda

Suborder Oniscidea Latreille, 1803

Family Scyphacidae Dana, 1852

***Quelpartoniscus toyamaensis*, n. sp.**

(Toyama-umibe-warajimushi, new)

Fig. 1.

Description of male: Body (Fig.1A) long, 2.5 times as wide. Color of surface pale red in alcohol. Eyes small, each eye composed of 10 ommatidia. Cephalon with lateral projection lobe protruded. Posterior margin right-angled and

* Contributions from the Toyama Science Museum, No.311

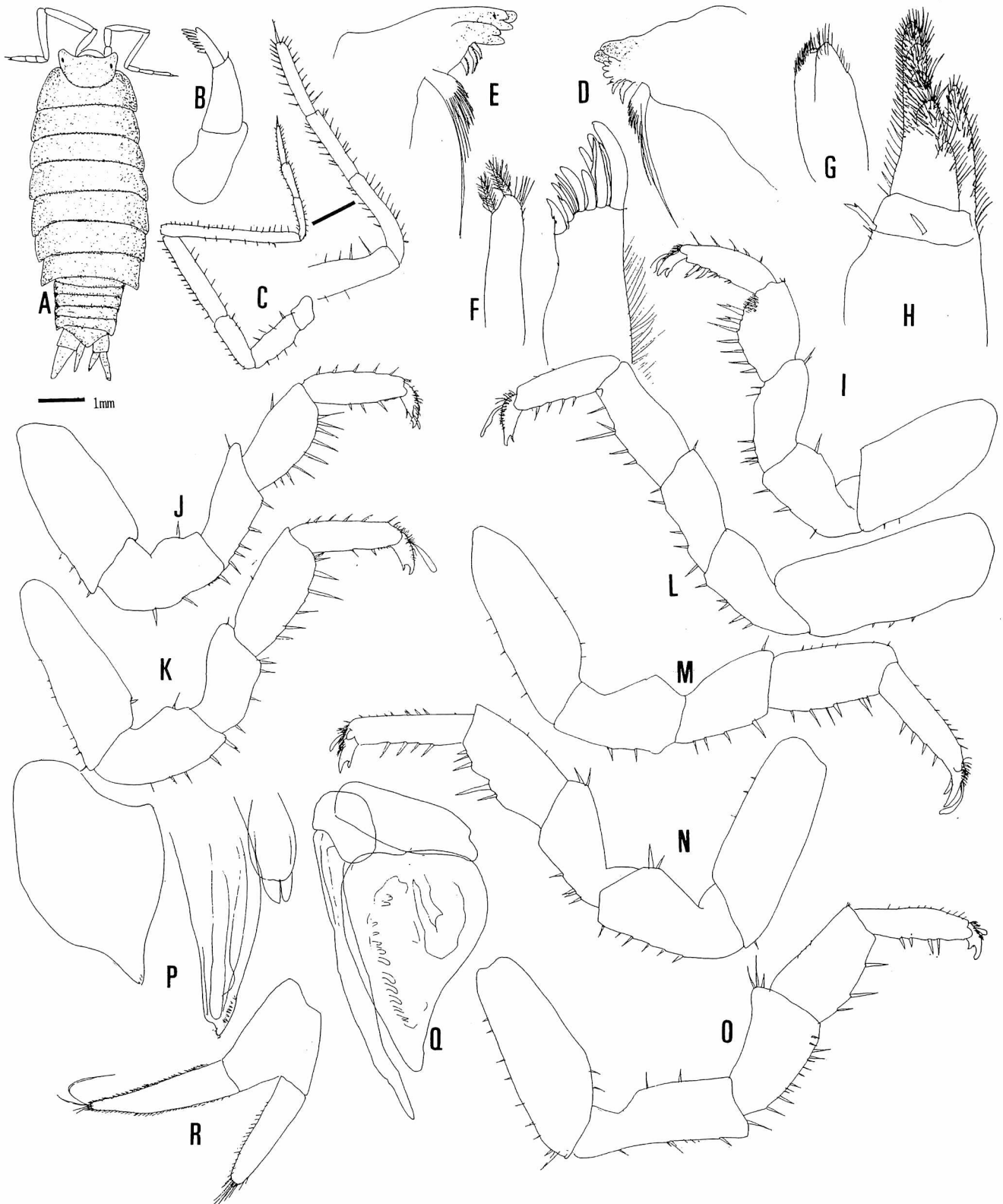


Fig.1 *Quelpartoniscus toyamaensis*, n. sp.

A: Dorsal view; B: Antennule; C: Antenna; D: Right mandible; E: Left mandible; F: Maxillula; G: Maxilla; H: Maxilliped; I-O: Pereopods 1-7; P: Penes and pleopod 1; Q: Pleopod 2; R: Uropod (All: Holotype male).

rounded.

Antennule (Fig. 1B): terminal segment with 7 aesthetascs at the tip. Antenna (Fig. 1C), reaching the posterior end of pereonite 2; flagellum consists of 3 segments: mutual length of 3 flagellar segments is about 2:1:1; terminal one with a long seta at the tip.

Right mandible (Fig. 1D): pars incisiva 2-toothed; lacinia mobilis not chitinized and 4-toothed; 3 hairy bristles; processus molaris represented by a tuft of long setae. Left mandible (Fig. 1E): pars incisiva 3-toothed; lacinia mobilis 2-chitinized; 3 hairy bristles; processus molaris represented by a tuft of long setae. Maxillula (Fig. 1F): inner lobe with 2 plumose setae; outer lobe with 12 teeth at the tip, two of them slender. Maxilla (Fig. 1G) rather slender, with many fine setae. Maxilliped (Fig. 1H): palp with only distinct basal suture line, other segments are recognized only on inner margin, each with many setae on both margins; endite row and triangular.

Pereopod 1 (Fig. 1I): basis 2.0 times as long as wide, with 2-3 short setae on inner margin; ischium $\frac{3}{5}$ as long as basis, with 3 setae on inner margin and a seta on outer margin; merus $\frac{3}{4}$ as long as ischium, with 7-9 setae on inner margin and a seta on outer margin; carpus as long as merus, and a little stouter than merus, with 7 setae including 2 distal bifid ones and a group of short setae on inner distal area; propodus as long as carpus but slender, with 8 setae including 2 distal bifid ones, and 6 setae on outer margin; dactylus with a tuft of long setae and a group of fine setae.

Pereopod 2 (Fig. 1J): basis 2.3 times as long as wide, with 4 short setae on inner margin; ischium $\frac{2}{3}$ as long as basis, with 3 setae on inner margin and a seta on outer margin; merus $\frac{4}{5}$ as long as ischium, with 5 setae on inner margin and a seta near outer distal angle; carpus about as long as merus, with 9 long setae on inner margin and a seta on outer margin; propodus; dactylus with a tuft of long setae and a group of fine setae.

Pereopod 3 (Fig. 1K): basis 2.5 times as long as wide, with 9-10 short setae on inner margin and a seta on outer margin; ischium $\frac{4}{5}$ as basis, with 5 setae including a bifid one on inner margin and a seta on outer margin; merus 0.7 times as long as ischium, with 5-6 setae on inner margin and a seta on outer margin; carpus 1.3 times as long as merus, with 7-8 relatively long setae on inner margin; propodus about 85% as long as carpus, with 2 setae on inner margin and 6 setae on outer margin; dactylus with a tuft of long setae and a group of fine setae.

Pereopod 4 (Fig. 1L): basis 3.0 times as long as wide; ischium about 55% as long as basis, with 4-5 setae on inner margin; merus $\frac{4}{5}$ as long as ischium, with 5-6 setae on inner margin and a seta at outer distal angle; carpus 1.3 times as long as merus, with 5 setae on inner margin; propodus as long as merus, with 4 setae on inner margin and 2-3 setae on outer margin; dactylus with a tuft of long setae and a group of fine setae.

Pereopod 5 (Fig. 1M): basis 2.9 times as long as wide, with 4-5 short setae on both margins; ischium $\frac{3}{5}$ as long as basis, with 2 setae on inner margin; merus $\frac{4}{5}$ as long as ischium, with 4 setae on inner margin and 1-2 setae on outer margin; carpus 1.2 times as long as merus, with 6 relatively long setae on inner margin; propodus as long as carpus, with 4 setae on inner margin and 8 setae on outer margin; dactylus with a tuft of long setae and a group of fine setae.

Pereopod 6 (Fig. 1N): basis 2.4 times as long as wide; ischium $\frac{3}{4}$ as long as basis, with 7 setae on inner margin and 2 setae on outer margin; merus 0.7 times as long as ischium, with 4 setae on inner margin, with 2 setae on outer margin; carpus a little longer than merus, with 5 setae on inner margin; propodus as long as carpus, with 4 setae on inner margin and 9-11 setae on outer margin; dactylus with a tuft of long setae and a group of fine setae.

Pereopod 7 (Fig. 1O): basis 2.7 times as long as wide, with 9-10 setae on inner margin and 2-3 setae on outer margin; ischium $\frac{3}{4}$ as long as basis, with 3-4 relatively longer and some shorter setae on inner margin and 2-3 setae on outer margin; merus $\frac{3}{4}$ as long as ischium, with 10-12 setae on inner margin and 3 setae on outer distal angle; carpus a little shorter than merus, with 3 setae on inner margin; propodus a little shorter than propodus, with 4 setae on inner margin and 11-12 setae on outer margin; dactylus with a tuft of long setae and a group of fine setae.

Penes (Fig. 1P) stout and rounded, distal area cleft.

Pleopod 1 (Fig. 1P): endopod stout, with 8 denticles on inner distal area; exopod trapezoidal.

Pleopod 2 (Fig. 1Q): endopod straight; exopod rounded triangular.

Uropod (Fig. 1 R):basis pentagonal ; endopod narrow, with a tuft of setae at the tip ; exopod 1.2 times longer and a little narrower than endopod, with a tuft of setae at the tip.

Female: Roughly similar to male except for copulatory apparatus.

Material examined: 2♂♂ (1♂ holotype, 6.8mm in body length and 1♂ paratype 6.0 mm in body length and 3♀♀ (1♀ allotype, 5.6 mm in body length and 2♀♀ paratypes, 5.9-6.5 mm in body length), Motoyashiki, Miyazaki, Asahi-machi, Toyama Pref., Aug.16,2003, coll.Noboru Nunomura; 2♀♀ paratypes 3.4-5.0 mm in body length), Motoyashiki, Miyazaki, Asahi-machi, Toyama Pref., Aug. 1, 2004, coll.Noboru Nunomura. Type series is deposited as follows: Holotype (TOYA Cr-13082), allotype (TOYA Cr-13083) and 3 paratypes (TOYA Cr-13084~13086) at the Toyama Science Museum; 2 paratypes (NSMT Cr-16237) at the National Science Museum, Tokyo.

Etymology: Toyama is a name of Prefecture, where the type series was collected.

Remarks: As far as I am aware, four species have been record as valid. The present new species is most closely allied to *Quelpartoniscus tsushimaensis* (Nunomura, 1990) known from Tsushima, but the former is separated from the latter in the following features: (1) paler color pattern, (2) less numerous ommatidia of eyes, (3) numerous teeth on the outer lobe of maxillula, (4) almost right-angled posterior part of pleotelson, (5) stouter endopod of male first pleopod, bearing denticles, (6) relatively shorter endopod of male second pleopod and (7) numerous aesthetascs on the last segment of antennule. The present new species is also allied to *Q. setoensis* Nunomura, 2003 reported from Shirahama, Wakayama, but differs from it in the following features: (1) darker body color, (2) projection of protuberances on the both sides of anterior of margin of cephalon, (3) less numerous ommatidia of eyes, (4) numerous teeth on the outer lobe of maxillula, (5) stouter penes with a cleft of posterior area and (6) numerous aesthetascs on the last segment of antennule.



Fig.2 Sampling site of the present new species

References

- Kwon, D.H., 1995. Terrestrial Isopoda (Crustacea) from Cheju Island. Korea. *Korean J.Zool.* 11: 509-538.
- Nunomura, N., 1986. Studies on the Terrestrial Isopod Crustaceans in Japan.III. Taxonomy of the Families Scyphacidae (continued, Marinoniscidae, Halophilosciidae, Philosciidae and Oniscidae. *Bull. Toyama Sci. Mus.* 9:1-72.
- Nunomura, N., 1990. Studies on the Terrestrial Isopod Crustaceans in Japan, V. Taxonomy of the families of Armadillidiidae, Armadillidae and Tylidae, with taxonomic Supplements to some other Families. *Bull. Toyama Sci. Mus.* 13: 1-58.
- Nunomura, N., 2003. Four new terrestrial isopod crustaceans from Kashima Islet and its neighboring, Tanabe Bay. *Bull. Toyama Sci. Mus.* 28: 13-24.